

In the Claims

Please amend the claims as follows.

1. (Canceled).

2. (Canceled).

3. (Previously Presented) The method according to claim 4 wherein said transport panel used in fabricating the transparent panel-form loudspeaker is selected to have said ratio of elastic modulus to density greater than 80 and less than 180 GPa/(g/cm³) and said ratio of length to thickness greater than 80 and less than 600.

4. (Previously Presented) A method of making a transparent panel-form loudspeaker, the loudspeaker comprised of a rectangular transparent panel having a length a and a width b, wherein b is less than or equal to a to be capable of sustaining flexural vibration over an area of the rectangular transparent panel, said method comprising the steps of:

(a) analyzing the distributions of modal parameters, which include natural frequencies, modal amplitudes, mode shapes and phase angles, in the modal analysis of said rectangular transparent panel which is driven by a preselected number of transducers to generate flexural vibration of said rectangular transparent panel and supported peripherally by a flexible suspension device comprised of a continuous corrugated cloth support and several discrete supports, said modal parameters varying according to values

of design parameters of said transparent panel-form loudspeaker including a ratio of elastic modulus to density of the material used to fabricate said rectangular transparent panel, a ratio of length to thickness of said rectangular transparent panel, locations of said transducers and discrete supports on a peripheral edge of said rectangular transparent panel;

(b) analyzing a sound pressure level spectrum generated by said transparent panel-form loudspeaker, said sound pressure level spectrum also varying according to the values of said design parameters of said panel-form loudspeaker;

(c) identifying favorable modal parameters which are beneficial to sound radiation and unfavorable modal parameters which have adverse effects on the sound radiation;

(d) selecting the values of said design parameters resulting in suppressing the adverse effects of the unfavorable modal parameters, magnifying beneficial effects of the unfavorable modal parameters, and achieving a desired sound pressure level spectrum over a specific frequency range; and

(e) making said rectangular transparent panel of said panel-form loudspeaker with selected values of said design parameters;

wherein said design parameters of the transparent panel-form loudspeaker are selected via a two-level optimization approach in which the ratio of elastic modulus to density and the ratio of length to thickness of the transparent panel are selected to maximize the sound pressure levels at some specific frequencies for the transparent panel-form loudspeaker at a first level of optimization, while locations of said transducers and said discrete supports of the flexible suspension device on a peripheral edge of the rectangular transparent panel are selected to make the

panel-form loudspeaker produce more uniform distribution of the sound pressure level in a specific frequency range at a second level of optimization; and

wherein said transducers are located at points with distances greater than one tenth of lengths of edges on which the transducers are mounted away from ends of the edges and the distances between supporting points of discrete supports and said transducers are greater than one tenth of the length of the edge on which both said supporting points and the transducers are situated.

5. - 18. (Canceled).

19. (New) A method of making a transparent panel-form loudspeaker, the loudspeaker comprised of a rectangular transparent panel having a length a and a width b , wherein b is less than or equal to a to be capable of sustaining flexural vibration over an area of the rectangular transparent panel, said method comprising the steps of:

(a) analyzing the distributions of modal parameters, which include natural frequencies, modal amplitudes, mode shapes and phase angles, in the modal analysis of said rectangular transparent panel which is driven by a preselected number of transducers to generate flexural vibration of said rectangular transparent panel and supported peripherally by a flexible suspension device comprised of a continuous corrugated cloth support and several discrete supports, said modal parameters varying according to values of design parameters of said transparent panel-form loudspeaker including a ratio of elastic modulus to density of the material used to fabricate said rectangular transparent panel, a ratio of length to thickness of said

rectangular transparent panel, locations of said transducers and discrete supports on a peripheral edge of said rectangular transparent panel;

(b) analyzing a sound pressure level spectrum generated by said transparent panel-form loudspeaker, said sound pressure level spectrum also varying according to the values of said design parameters of said panel-form loudspeaker;

(c) identifying favorable modal parameters which are beneficial to sound radiation and unfavorable modal parameters which have adverse effects on the sound radiation;

(d) selecting the values of said design parameters resulting in suppressing the adverse effects of the unfavorable modal parameters, magnifying beneficial effects of the unfavorable modal parameters, and achieving a desired sound pressure level spectrum over a specific frequency range; and

(e) making said rectangular transparent panel of said panel-form loudspeaker with selected values of said design parameters;

wherein said transducers are located at points with distances greater than one tenth of lengths of edges on which the transducers are mounted away from ends of the edges and the distances between supporting points of discrete supports and said transducers are greater than one tenth of the length of the edge on which both said supporting points and the transducers are situated.

20. (New) The method according to claim 19 wherein said design parameters of the transparent panel-form loudspeaker are selected via a two-level optimization approach in which the ratio of elastic modulus to density and the ratio of length to thickness of the transparent panel are selected to maximize the sound pressure levels at some specific frequencies for the transparent panel-form

loudspeaker at a first level of optimization, while locations of said transducers and said discrete supports of the flexible suspension device on a peripheral edge of the rectangular transparent panel are selected to make the panel-form loudspeaker produce more uniform distribution of the sound pressure level in a specific frequency range at a second level of optimization.

21. (New) The method according to claim 20 wherein said transport panel used in fabricating the transparent panel-form loudspeaker is selected to have said ratio of elastic modulus to density greater than 80 and less than 180 GPa/(g/cm³) and said ratio of length to thickness greater than 80 and less than 600.